

SEQUENCE LISTING

(1) GENERAL INFORMATION:

- (i) APPLICANT: Gorman, Daniel M.
Randall, Troy D.
Zlotnik, Albert
- (ii) TITLE OF INVENTION: MAMMALIAN CELL SURFACE ANTIGENS; RELATED REAGENTS
- (iii) NUMBER OF SEQUENCES: 8
- (iv) CORRESPONDENCE ADDRESS:
 - (A) ADDRESSEE: DNAX Research Institute
 - (B) STREET: 901 California Avenue
 - (C) CITY: Palo Alto
 - (D) STATE: California
 - (E) COUNTRY: USA
 - (F) ZIP: 94304-1104
- (v) COMPUTER READABLE FORM:
 - (A) MEDIUM TYPE: Floppy disk
 - (B) COMPUTER: IBM PC compatible
 - (C) OPERATING SYSTEM: PC-DOS/MS-DOS
 - (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
- (vi) CURRENT APPLICATION DATA:
 - (A) APPLICATION NUMBER: US 08/911,423
 - (B) FILING DATE: 14-AUG-1997
 - (C) CLASSIFICATION:
- (vii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: US 60/023,419
 - (B) FILING DATE: 16-AUG-1996
- (vii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: US 60/027,901
 - (B) FILING DATE: 07-OCT-1996
- (viii) ATTORNEY/AGENT INFORMATION:
 - (A) NAME: Ching, Edwin P.
 - (B) REGISTRATION NUMBER: 34,090
 - (C) REFERENCE/DOCKET NUMBER: DX0612K
- (ix) TELECOMMUNICATION INFORMATION:
 - (A) TELEPHONE: 650-852-9196
 - (B) TELEFAX: 650-496-1200

(2) INFORMATION FOR SEQ ID NO:1:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 1073 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

(A) NAME/KEY: CDS

(B) LOCATION: 68..751

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

CTCGAGATCC ATTGTGCTGG AAAGGGA	ACT CCTGAAATCA GCCGACAGAA GACTCAGGAG	60
AAGCACT ATG GGG GCA TGG GCC ATG CTG TAT GGA GTC TCG ATG CTC TGT		109
Met Gly Ala Trp Ala Met Leu Tyr Gly Val Ser Met Leu Cys		
1 5 10		
GTG CTG GAC CTA GGT CAG CCG AGT GTA GTT GAG GAG CCT GGC TGT GGC		157
Val Leu Asp Leu Gly Gln Pro Ser Val Val Glu Glu Pro Gly Cys Gly		
15 20 25 30		
CCT GGC AAG GTT CAG AAC GGA AGT GGC AAC AAC ACT CGC TGC TGC AGC		205
Pro Gly Lys Val Gln Asn Gly Ser Gly Asn Asn Thr Arg Cys Cys Ser		
35 40 45		
CTG TAT GCT CCA GGC AAG GAG GAC TGT CCA AAA GAA AGG TGC ATA TGT		253
Leu Tyr Ala Pro Gly Lys Glu Asp Cys Pro Lys Glu Arg Cys Ile Cys		
50 55 60		
GTC ACA CCT GAG TAC CAC TGT GGA GAC CCT CAG TGC AAG ATC TGC AAG		301
Val Thr Pro Glu Tyr His Cys Gly Asp Pro Gln Cys Lys Ile Cys Lys		
65 70 75		
CAC TAC CCC TGC CAA CCA GGC CAG AGG GTG GAG TCT CAA GGG GAT ATT		349
His Tyr Pro Cys Gln Pro Gly Gln Arg Val Glu Ser Gln Gly Asp Ile		
80 85 90		
GTG TTT GGC TTC CGG TGT GTT GCC TGT GCC ATG GGC ACC TTC TCC GCA		397
Val Phe Gly Phe Arg Cys Val Ala Cys Ala Met Gly Thr Phe Ser Ala		
95 100 105 110		
GGT CGT GAC GGT CAC TGC AGA CTT TGG ACC AAC TGT TCT CAG TTT GGA		445
Gly Arg Asp Gly His Cys Arg Leu Trp Thr Asn Cys Ser Gln Phe Gly		
115 120 125		
TTT CTC ACC ATG TTC CCT GGG AAC AAG ACC CAC AAT GCT GTG TGC ATC		493
Phe Leu Thr Met Phe Pro Gly Asn Lys Thr His Asn Ala Val Cys Ile		
130 135 140		
CCG GAG CCA CTG CCC ACT GAG CAA TAC GGC CAT TTG ACT GTC ATC TTC		541
Pro Glu Pro Leu Pro Thr Glu Gln Tyr Gly His Leu Thr Val Ile Phe		
145 150 155		
CTG GTC ATG GCT GCA TGC ATT TTC TTC CTA ACC ACA GTC CAG CTC GGC		589
Leu Val Met Ala Ala Cys Ile Phe Phe Leu Thr Thr Val Gln Leu Gly		
160 165 170		
CTG CAC ATA TGG CAG CTG AGG AGG CAA CAC ATG TGT CCC CGA GAG ACC		637

[illegible]

(i) SEQUENCE CHARACTERISTICS:

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

Met	Gly	Ala	Trp	Ala	Met	Leu	Tyr	Gly	Val	Ser	Met	Leu	Cys	Val	Leu	
1				5					10						15	
Asp	Leu	Gly	Gln	Pro	Ser	Val	Val	Glu	Glu	Pro	Gly	Cys	Gly	Pro	Gly	
			20					25					30			
Lys	Val	Gln	Asn	Gly	Ser	Gly	Asn	Asn	Thr	Arg	Cys	Cys	Ser	Leu	Tyr	
		35					40					45				
Ala	Pro	Gly	Lys	Glu	Asp	Cys	Pro	Lys	Glu	Arg	Cys	Ile	Cys	Val	Thr	
	50					55					60					
Pro	Glu	Tyr	His	Cys	Gly	Asp	Pro	Gln	Cys	Lys	Ile	Cys	Lys	His	Tyr	
	65				70					75					80	
Pro	Cys	Gln	Pro	Gly	Gln	Arg	Val	Glu	Ser	Gln	Gly	Asp	Ile	Val	Phe	
				85					90					95		
Gly	Phe	Arg	Cys	Val	Ala	Cys	Ala	Met	Gly	Thr	Phe	Ser	Ala	Gly	Arg	
			100					105					110			

Asp Gly His Cys Arg Leu Trp Thr Asn Cys Ser Gln Phe Gly Phe Leu
 115 120 125
 Thr Met Phe Pro Gly Asn Lys Thr His Asn Ala Val Cys Ile Pro Glu
 130 135 140
 Pro Leu Pro Thr Glu Gln Tyr Gly His Leu Thr Val Ile Phe Leu Val
 145 150 155 160
 Met Ala Ala Cys Ile Phe Phe Leu Thr Thr Val Gln Leu Gly Leu His
 165 170 175
 Ile Trp Gln Leu Arg Arg Gln His Met Cys Pro Arg Glu Thr Gln Pro
 180 185 190
 Phe Ala Glu Val Gln Leu Ser Ala Glu Asp Ala Cys Ser Phe Gln Phe
 195 200 205
 Pro Glu Glu Glu Arg Gly Glu Gln Thr Glu Glu Lys Cys His Leu Gly
 210 215 220
 Gly Arg Trp Pro
 225

(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 1006 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 1..723

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

ATG GCA CAG CAC GGG GCG ATG GGC GCG TTT CGG GCC CTG TGC GGC CTG	48
Met Ala Gln His Gly Ala Met Gly Ala Phe Arg Ala Leu Cys Gly Leu	
1 5 10 15	
GCG CTG CTG TGC GCG CTC AGC CTG GGT CAG CGC CCC ACC GGG GGT CCC	96
Ala Leu Leu Cys Ala Leu Ser Leu Gly Gln Arg Pro Thr Gly Gly Pro	
20 25 30	
GGG TGC GGC CCT GGG CGC CTC CTG CTT GGG ACG GGA ACG GAC GCG CGC	144
Gly Cys Gly Pro Gly Arg Leu Leu Leu Gly Thr Gly Thr Asp Ala Arg	
35 40 45	
TGC TGC CGG GTT CAC ACG ACG CGC TGC TGC CGC GAT TAC CCG GGC GAG	192
Cys Cys Arg Val His Thr Thr Arg Cys Cys Arg Asp Tyr Pro Gly Glu	
50 55 60	

GAG TGC TGT TCC GAG TGG GAC TGC ATG TGT GTC CAG CCT GAA TTC CAC	240
Glu Cys Cys Ser Glu Trp Asp Cys Met Cys Val Gln Pro Glu Phe His	
65 70 75 80	
TGC GGA GAC CCT TGC TGC ACG ACC TGC CGG CAC CAC CCT TGT CCC CCA	288
Cys Gly Asp Pro Cys Cys Thr Thr Cys Arg His His Pro Cys Pro Pro	
85 90 95	
GGC CAG GGG GTA CAG TCC CAG GGG AAA TTC AGT TTT GGC TTC CAG TGT	336
Gly Gln Gly Val Gln Ser Gln Gly Lys Phe Ser Phe Gly Phe Gln Cys	
100 105 110	
ATC GAC TGT GCC TCG GGG ACC TTC TCC GGG GGC CAC GAA GGC CAC TGC	384
Ile Asp Cys Ala Ser Gly Thr Phe Ser Gly Gly His Glu Gly His Cys	
115 120 125	
AAA CCT TGG ACA GAC TGC ACC CAG TTC GGG TTT CTC ACT GTG TTC CCT	432
Lys Pro Trp Thr Asp Cys Thr Gln Phe Gly Phe Leu Thr Val Phe Pro	
130 135 140	
GGG AAC AAG ACC CAC AAC GCT GTG TGC GTC CCA GGG TCC CCG CCG GCA	480
Gly Asn Lys Thr His Asn Ala Val Cys Val Pro Gly Ser Pro Pro Ala	
145 150 155 160	
GAG CCG CTT GGG TGG CTG ACC GTC GTC CTC CTG GCC GTG GCC GCC TGC	528
Glu Pro Leu Gly Trp Leu Thr Val Val Leu Leu Ala Val Ala Ala Cys	
165 170 175	
GTC CTC CTC CTG ACC TCG GCC CAG CTT GGA CTG CAC ATC TGG CAG CTG	576
Val Leu Leu Leu Thr Ser Ala Gln Leu Gly Leu His Ile Trp Gln Leu	
180 185 190	
AGG AGT CAG TGC ATG TGG CCC CGA GAG ACC CAG CTG CTG CTG GAG GTG	624
Arg Ser Gln Cys Met Trp Pro Arg Glu Thr Gln Leu Leu Leu Glu Val	
195 200 205	
CCG CCG TCG ACC GAA GAC GCC AGA AGC TGC CAG TTC CCC GAG GAA GAG	672
Pro Pro Ser Thr Glu Asp Ala Arg Ser Cys Gln Phe Pro Glu Glu Glu	
210 215 220	
CGG GGC GAG CGA TCG GCA GAG GAG AAG GGG CGG CTG GGA GAC CTG TGG	720
Arg Gly Glu Arg Ser Ala Glu Glu Lys Gly Arg Leu Gly Asp Leu Trp	
225 230 235 240	
GTG TGAGCCTGGC CGTCCTCCGG GGCCACCGAC CGCAGCCAGC CCCTCCCCAG	773
Val	
GAGCTCCCCA GGCCGCAGGG GCTCTGCGTT CTGCTCTGGG CCGGGCCCTG CTCCCCTGGC	833
AGCAGAAGTG GGTGCAGGAA GGTGGCAGTG ACCAGCGCCC TGGACCATGC AGTTCGGCGG	893
CCGCTCTAAA GGATCCAAGC TTACGTACGC GTGCATGCGA CGTCATAGCT CTTCTATAGT	953
GTCACCTAAA TTCAATTCAC TGGCCGTCGT TTTACAACGT CCTGACTGGG AAA	1006

(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 241 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

Met Ala Gln His Gly Ala Met Gly Ala Phe Arg Ala Leu Cys Gly Leu
1 5 10 15
Ala Leu Leu Cys Ala Leu Ser Leu Gly Gln Arg Pro Thr Gly Gly Pro
20 25 30
Gly Cys Gly Pro Gly Arg Leu Leu Leu Gly Thr Gly Thr Asp Ala Arg
35 40 45
Cys Cys Arg Val His Thr Thr Arg Cys Cys Arg Asp Tyr Pro Gly Glu
50 55 60
Glu Cys Cys Ser Glu Trp Asp Cys Met Cys Val Gln Pro Glu Phe His
65 70 75 80
Cys Gly Asp Pro Cys Cys Thr Thr Cys Arg His His Pro Cys Pro Pro
85 90 95
Gly Gln Gly Val Gln Ser Gln Gly Lys Phe Ser Phe Gly Phe Gln Cys
100 105 110
Ile Asp Cys Ala Ser Gly Thr Phe Ser Gly Gly His Glu Gly His Cys
115 120 125
Lys Pro Trp Thr Asp Cys Thr Gln Phe Gly Phe Leu Thr Val Phe Pro
130 135 140
Gly Asn Lys Thr His Asn Ala Val Cys Val Pro Gly Ser Pro Pro Ala
145 150 155 160
Glu Pro Leu Gly Trp Leu Thr Val Val Leu Leu Ala Val Ala Ala Cys
165 170 175
Val Leu Leu Leu Thr Ser Ala Gln Leu Gly Leu His Ile Trp Gln Leu
180 185 190
Arg Ser Gln Cys Met Trp Pro Arg Glu Thr Gln Leu Leu Leu Glu Val
195 200 205
Pro Pro Ser Thr Glu Asp Ala Arg Ser Cys Gln Phe Pro Glu Glu Glu
210 215 220
Arg Gly Glu Arg Ser Ala Glu Glu Lys Gly Arg Leu Gly Asp Leu Trp
225 230 235 240
Val

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 723 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

ATGGCNCARC	AYGGNGCNAT	GGGNGCNTTY	MGNGCNYTNT	GYGGNYTNGC	NYTNYTNTGY	60
GCNYTNWSNY	TGGNCARMG	NCCNACNGGN	GGNCCNGGNT	GYGGNCCNGG	NMGNYTNYTN	120
YTNGGNACNG	GNACNGAYGC	NMGNTGYTGY	MGNGTNCAYA	CNACNMGNTG	YTGymGNGAY	180
TAYCCNGGNG	ARGARTGYTG	YWSNGARTGG	GAYTGYATGT	GYGTNCARCC	NGARTTYCAY	240
TGYGGNGAYC	CNTGYTGYAC	NACNTGYMGN	CAYCAYCCNT	GYCCNCCNGG	NCARGGNGTN	300
CARWSNCARG	GNAARTTYWS	NTTYGGNTTY	CARTGYATHG	AYTGYGCNWS	NGGNACNTTY	360
WSNGGNGGNC	AYGARGGNCA	YTGYAARCCN	TGGACNGAYT	GYACNCARTT	YGGNTTTYTN	420
ACNGTNTTYC	CNGGNAAYAA	RACNCAYAA	GCNGTNTGYG	TNCCNGGNWS	NCCNCCNGCN	480
GARCCNYTNG	GNTGGYTNAC	NGTNGTNYTN	YTNGCNGTNG	CNGCNTGYGT	NYTNYTNYTN	540
ACNWSNGCNC	ARYTNGGNYT	NCAyatHTGG	CARYTNMGnw	SNCARTGYAT	GTGGCCNMGN	600
GARACNCARY	TNYTNYTNGA	RGTNCCNCCN	WSNACNGARG	AYGCNMGNWS	NTGYCARTTY	660
CCNGARGARG	ARMGNGGNGA	RMGNWSNGCN	GARGARAARG	GNMGNYTNGG	NGAYYTNTGG	720
GTN						723

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 228 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

Met	Gly	Ala	Phe	Arg	Ala	Leu	Cys	Gly	Leu	Ala	Leu	Leu	Cys	Ala	Leu
1				5				10						15	

Ser	Leu	Gly	Gln	Arg	Pro	Thr	Gly	Gly	Pro	Gly	Cys	Gly	Pro	Gly	Arg	20	25	30	
Leu	Leu	Leu	Gly	Thr	Gly	Thr	Asp	Ala	Arg	Cys	Cys	Arg	Val	His	Thr	35	40	45	
Thr	Arg	Cys	Cys	Arg	Asp	Tyr	Pro	Gly	Glu	Glu	Cys	Cys	Ser	Glu	Trp	50	55	60	
Asp	Cys	Met	Cys	Val	Gln	Pro	Glu	Phe	His	Cys	Gly	Asp	Pro	Cys	Cys	65	70	75	80
Thr	Thr	Cys	Arg	His	His	Pro	Cys	Pro	Pro	Gly	Gln	Gly	Val	Gln	Ser	85	90	95	
Gln	Gly	Lys	Phe	Ser	Phe	Gly	Phe	Gln	Cys	Ile	Asp	Cys	Ala	Ser	Gly	100	105	110	
Thr	Phe	Ser	Gly	Gly	His	Glu	Gly	His	Cys	Lys	Pro	Trp	Thr	Asp	Cys	115	120	125	
Thr	Gln	Phe	Gly	Phe	Leu	Thr	Val	Phe	Pro	Gly	Asn	Lys	Thr	His	Asn	130	135	140	
Ala	Val	Cys	Val	Pro	Gly	Ser	Pro	Pro	Ala	Glu	Pro	Leu	Gly	Trp	Leu	145	150	155	160
Thr	Val	Val	Leu	Leu	Ala	Val	Ala	Ala	Cys	Val	Leu	Leu	Leu	Thr	Ser	165	170	175	
Ala	Gln	Leu	Gly	Leu	His	Ile	Trp	Gln	Leu	Arg	Lys	Thr	Gln	Leu	Leu	180	185	190	
Leu	Glu	Val	Pro	Pro	Ser	Thr	Glu	Asp	Ala	Arg	Ser	Cys	Gln	Phe	Pro	195	200	205	
Glu	Glu	Glu	Arg	Gly	Glu	Arg	Ser	Ala	Glu	Glu	Lys	Gly	Arg	Leu	Gly	210	215	220	
Asp	Leu	Trp	Val													225			

(2) INFORMATION FOR SEQ ID NO:7:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 232 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

Met	Gly	Ala	Phe	Arg	Ala	Leu	Cys	Gly	Leu	Ala	Leu	Leu	Cys	Ala	Leu	1	5	10	15
Ser	Leu	Gly	Gln	Arg	Pro	Thr	Gly	Gly	Pro	Gly	Cys	Gly	Pro	Gly	Arg	20	25	30	
Leu	Leu	Leu	Gly	Thr	Gly	Thr	Asp	Ala	Arg	Cys	Cys	Arg	Val	His	Thr	35	40	45	
Thr	Arg	Cys	Cys	Arg	Asp	Tyr	Pro	Gly	Glu	Glu	Cys	Cys	Ser	Glu	Trp	50	55	60	
Asp	Cys	Met	Cys	Val	Gln	Pro	Glu	Phe	His	Cys	Gly	Asp	Pro	Cys	Cys	65	70	75	80
Thr	Thr	Cys	Arg	His	His	Pro	Cys	Pro	Pro	Gly	Gln	Gly	Val	Gln	Ser	85	90	95	
Gln	Gly	Lys	Ser	Trp	Arg	Cys	Leu	Trp	Glu	Ser	Thr	Gln	Ala	Arg	Gly	100	105	110	
Ser	Thr	Arg	Ala	Arg	Gly	Arg	Ala	Arg	Gly	His	Arg	Cys	Pro	Ala	Arg	115	120	125	
Thr	Cys	Gly	Val	Trp	Gly	Pro	Glu	Ser	Cys	Glu	Ala	Gly	Gln	Ala	Arg	130	135	140	
Pro	Cys	Ser	Gly	Thr	Thr	Gly	His	Glu	Ala	Leu	Gly	Val	Ser	Cys	Pro	145	150	155	160
Cys	Phe	Leu	Ser	Leu	Gly	Phe	Ser	Ile	Gln	His	Glu	Gly	Cys	Glu	Asn	165	170	175	
Pro	Ala	Gly	Arg	Trp	Gly	Arg	Val	Pro	Gly	Ala	Val	Trp	Leu	Ser	Gly	180	185	190	
Pro	Gly	His	Pro	Ser	Cys	Leu	Ser	Ser	Pro	His	Thr	Glu	Arg	Ala	Cys	195	200	205	
Pro	Val	Pro	Pro	Gly	Val	Leu	Ser	Gly	Ala	Trp	Gly	Cys	Thr	Leu	Phe	210	215	220	
Trp	Lys	Glu	Gln	Leu	Lys	Ser	Ser	225	230										

(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 311 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

Met Gly Ala Phe Arg Ala Leu Cys Gly Leu Ala Leu Leu Cys Ala Leu
1 5 10 15
Ser Leu Gly Gln Arg Pro Thr Gly Gly Pro Gly Cys Gly Pro Gly Arg
20 25 30
Leu Leu Leu Gly Thr Gly Thr Asp Ala Arg Cys Cys Arg Val His Thr
35 40 45
Thr Arg Cys Cys Arg Asp Tyr Pro Gly Glu Glu Cys Cys Ser Glu Trp
50 55 60
Asp Cys Met Cys Val Gln Pro Glu Phe His Cys Gly Asp Pro Cys Cys
65 70 75 80
Thr Thr Cys Arg His His Pro Cys Pro Pro Gly Gln Gly Val Gln Ser
85 90 95
Gln Gly Lys Phe Ser Phe Gly Phe Gln Cys Ile Asp Cys Ala Ser Gly
100 105 110
Thr Phe Ser Gly Gly His Glu Gly His Cys Lys Pro Trp Thr Asp Cys
115 120 125
Thr Gln Phe Gly Phe Leu Thr Val Phe Pro Gly Asn Lys Thr His Asn
130 135 140
Ala Val Cys Val Pro Gly Ser Pro Pro Ala Glu Pro Leu Gly Trp Leu
145 150 155 160
Thr Val Val Leu Leu Ala Val Ala Ala Cys Val Leu Leu Leu Thr Ser
165 170 175
Ala Gln Leu Gly Leu His Ile Trp Gln Leu Arg Ser Gln Cys Met Trp
180 185 190
Pro Arg Gly Leu Ser Gln Pro Gly Ala Gly Arg Trp Glu His Gly Cys
195 200 205
Leu Leu Thr Val Ala Pro Leu Gln Arg Pro Ser Cys Cys Trp Arg Cys
210 215 220
Arg Arg Arg Pro Lys Thr Pro Glu Ala Ala Ser Ser Pro Arg Lys Ser
225 230 235 240
Gly Ala Ser Asp Arg Gln Arg Arg Arg Gly Gly Trp Glu Thr Cys Gly
245 250 255
Cys Glu Pro Gly Arg Pro Pro Gly Pro Pro Thr Ala Ala Ser Pro Ser
260 265 270
Pro Gly Ala Pro Gln Ala Ala Gly Ala Leu Arg Ser Ala Leu Gly Arg
275 280 285
Ala Leu Leu Pro Trp Gln Gln Lys Trp Val Gln Glu Gly Gly Ser Asp
290 295 300

Gln Arg Pro Gly Pro Cys Ser
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